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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/526,265	03/02/2005	Franz Riedl	72.100	6597
23598 7590 04/07/2010 BOYLE FREDRICKSON S.C. 840 North Plankinton Avenue MILWAUKEE, WI 53203				
			EXAMINER JOHNSON, MATTHEW A	
			ART UNIT 3656	PAPER NUMBER
			NOTIFICATION DATE 04/07/2010	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docketing@boylefred.com

Office Action Summary

Application No.

10/526,265

Applicant(s)

RIEDL, FRANZ

Examiner

MATTHEW A. JOHNSON

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 February 2010.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-13 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 18 December 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/GS/US)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/5/2010 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fervers (USP-7,171,866) in view of Shimada (USP-5,177,386).

Re claims 1, 2, 11 and 13: Fervers discloses a soil compacting device (C1 L10, C2 L57) and a method of operating a soil compacting device comprising imbalance shafts (2, 3) that stand parallel to one another (Fig. 1) and that can be driven in opposite directions with the same rotational speed (C4 L1-5), each of the imbalance shafts bearing an imbalance mass (15) attached to it in stationary fashion relative to the shaft (Fig. 1) and an imbalance mass (16) that can be

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moved in a rotational fashion relative to the shaft (C4 L56-61), and each of the imbalance shafts having allocated to it an adjustment device (17, 18) for individually adjusting (C2 L50-61) a position of each respective movable imbalance mass relative to the imbalance shaft that bears it, and wherein, during operation, a change of the relative position can be executed in such a way that the magnitude of an overall centrifugal force resulting from the imbalance masses is proportional to a speed of forward or backward motion of the coil compacting device (Fig. 2).

While Fervers does indeed disclose that individual adjustment of the imbalance masses allows an almost infinite number of vibrational patterns, in particular amplitudes and resulting vibration directions (C2 L50-61; an amplitude of zero and a vibration direction of zero would fall under one of the infinite possible combinations), Fervers does not explicitly disclose during operation, the relative positions of each movable imbalance mass on the associated imbalance shaft can be adjusted using the adjustment means in such a way that the centrifugal forces produced by the imbalance masses on each imbalance shaft cancel each other out as a whole in each rotational position of the imbalance shafts.

Shimada teaches a vibration exciter comprising imbalance shafts (21, 22) having fixed imbalance masses (51Aa, 51Ab, 52Aa, 52Ab), movable imbalance masses (51B, 52B), and an adjustment device (32, 34) wherein during operation, the relative positions of each movable imbalance mass on the associated imbalance shaft can be adjusted using the adjustment means in such a way that

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the centrifugal forces produced by the imbalance mass on each imbalance shaft cancel each other out as a whole in each rotational position of the imbalance shafts (C8 L5-12, L34- 49; see also Figs. 4a and 5a), for the purpose of allowing each movable imbalance mass to be rotated smoothly without a great driving power, leading to the implementation of energy saving (C8 L34-49).

It would have been obvious to a person having ordinary skill in the art at the time of the invention to have modified the device of Fervers such that during operation, the relative positions of each movable imbalance mass on the associated imbalance shaft can be adjusted using the adjustment means in such a way that the centrifugal forces produced by the imbalance masses on each imbalance shaft cancel each other out as a whole in each rotational position of the imbalance shafts, as taught by Shimada, for the purpose of allowing each movable imbalance mass to be rotated smoothly without a great driving power, leading to the implementation of energy saving (C8 L34-49).

Additionally, while Fervers does indeed disclose that the soil compacting device can be operated in a forward, rearward and stand still mode (Fig. 2) and further discloses that individual adjustment of the imbalance masses allows an almost infinite number of vibrational patterns, in particular amplitudes and resulting vibration directions (C2 L50-61), Fervers does not explicitly disclose wherein to effect forward movement of the soil compacting device, the movable masses are rotated 90 degrees with respect to the imbalance shaft, wherein to bring the compacting device to a standstill, the movable masses are rotated 180 degrees with respect to the imbalance shaft, and wherein to effect backward

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motion of the soil compacting device, the movable imbalance mass is rotated in a direction opposite that of the direction of rotation the movable imbalance mass used to effect forward movement and by 90 degrees with respect to the imbalance shaft.

Shimada teaches a vibration generator that generates a unidirectional force if the movable masses (51B, 52B) are rotated 90 degrees with respect to the imbalance shaft (C8 L12-33; see also Figs. 4B, 4C, 5B and 5C), and zero force if the movable masses (51B, 52B) are rotated 180 degrees with respect to the imbalance shaft (C8 L5-12, L34-41 see also Figs. 4A and 5A), in order to achieve the predictable result of providing a mode of operation in which a unidirectional force is directed in a desired direction and a mode of operation in which the forces are balanced and no unidirectional force is produced.

It would have been obvious to a person having ordinary skill in the art at the time of the invention to have modified the device of Fervers such that to effect forward movement of the soil compacting device, the movable masses are rotated 90 degrees with respect to the imbalance shaft, wherein to bring the compacting device to a standstill, the movable masses are rotated 180 degrees with respect to the imbalance shaft, and wherein to effect backward motion of the soil compacting device, the movable imbalance mass is rotated in a direction opposite that of the direction of rotation the movable imbalance mass used to effect forward movement and by 90 degrees with respect to the imbalance shaft, as taught by Shimada, in order to achieve the predictable result of providing a mode of operation in which a unidirectional force is directed in a desired direction

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and a mode of operation in which the forces are balanced and no unidirectional force is produced.

Re claim 3: Fervers discloses in order to effect a forward motion of the soil compacting device in a first horizontal direction, the relative positions of the imbalance masses are capable of being modified in such a way that the centrifugal forces of the imbalance masses do not cancel one another, but instead generate an overall centrifugal force having a horizontal component (Fig. 2, C5 L49-56).

Re claim 4: Ferver does not explicitly disclose during a transition between forward and backward motion, the centrifugal force of the imbalance masses cancel each other out as a whole.

Shimada teaches that when the device is at a standstill, the centrifugal forces cancel each other out (C8 L34-41), for the purpose of allowing each movable imbalance mass to be rotated smoothly without a great driving power, leading to the implementation of energy saving (C8 L34-41).

It would have been obvious to a person having ordinary skill in the art at the time of the invention to have modified the device of Fervers such that during a transition between forward and backward motion, the centrifugal force of the imbalance masses cancel each other out as a whole, as taught by Shimada, for the purpose of allowing each movable imbalance mass to be rotated smoothly without a great driving power, leading to the implementation of energy saving (C8 L34-41).

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Re claim 5: Fervers discloses the change of the relative positions can be executed continuously (C3 L27-30).

Re claim 6: Fervers discloses the imbalance shafts are coupled with one another positively so as to be capable of rotation in opposite directions (C4 L1-5).

Re claim 7: Fervers discloses the phase position of the imbalance shafts to one another cannot be modified (see page 4 lines 4-8 of Applicants specification).

Re claim 8: Fervers discloses the adjustment of the relative positions on the imbalance shafts using the adjustment means can be executed synchronously (C3 L10-17).

Re claims 9 and 12: Fervers discloses the adjustment means can be actuated hydraulically (C4 L31-35).

Re claim 10: Fervers discloses at least one part of the imbalance masses is formed from a plurality of imbalance elements (15 and 16).

Response to Arguments

4. Applicant's arguments filed 2/5/2010 have been fully considered but they are not persuasive.
5. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

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6. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Applicant argues that one of ordinary skill would not incorporate the teachings of Shimada into the device of Fervers because there is no evidence in the prior art that Fervers vibratory compacting plate would benefit from having the vibrations generated by the imbalance mass offset each other at startup.

In response, Shimada discloses the benefit of having the forces offset allows each movable imbalance mass to be rotated smoothly without a great driving power, leading to the implementation of energy saving (C8 L34-41). Thus the teachings of Shimada would improve the device of Fervers by allowing a more smooth rotation of the movable masses and save energy needed to operate the device leading to greater efficiency. One of ordinary skill would readily recognize that smooth operation and power savings are beneficial to all mechanical devices.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MATTHEW A. JOHNSON whose telephone number is (571)272-7944. The examiner can normally be reached on Monday - Friday 9:00a.m. - 5:30p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on 571-272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/MATTHEW A JOHNSON/
Examiner, Art Unit 3656

/Richard WL Ridley/

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Supervisory Patent Examiner, Art Unit 3656